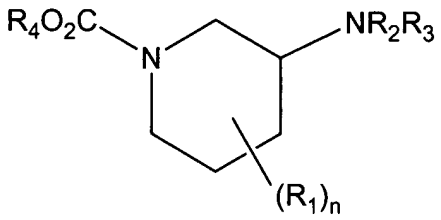
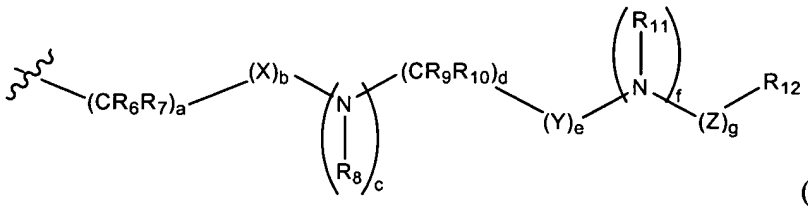
AMENDMENTS TO THE CLAIMS

1. (ORIGINAL) A method of making a compound of formula (Ia)



(Ia)

wherein $R_1$ is carboxy, cyano, deuterium, ($C_1$-$C_6$)alkyl, ($C_1$-$C_6$)alkoxy, ($C_1$-$C_6$)acyl, ($C_1$-$C_6$)alkylamino, amino($C_1$-$C_6$)alkyl, ($C_1$-$C_6$)alkoxy-CO-NH, ($C_1$-$C_6$)alkylamino-CO-, ($C_2$-$C_6$)alkenyl, ($C_2$-$C_6$) alkynyl, ($C_1$-$C_6$)alkylamino, amino($C_1$-$C_6$)alkyl, ($C_1$-$C_6$)alkoxy($C_1$-$C_6$)alkyl, ($C_1$-$C_6$)acyloxy($C_1$-$C_6$)alkyl, nitro, cyano($C_1$-$C_6$)alkyl, nitro($C_1$-$C_6$)alkyl, trifluoromethyl, trifluoromethyl($C_1$-$C_6$)alkyl, ($C_1$-$C_6$)acylamino, ($C_1$-$C_6$)acylamino($C_1$-$C_6$)alkyl, ($C_1$-$C_6$)alkoxy($C_1$-$C_6$)acylamino, amino($C_1$-$C_6$)acyl, amino($C_1$-$C_6$)acyl($C_1$-$C_6$)alkyl, ($C_1$-$C_6$)alkylamino($C_1$-$C_6$)acyl, (($C_1$-$C_6$)alkyl)$_2$amino($C_1$-$C_6$)acyl, $R_{15}R_{16}$N-CO-O-, $R_{15}R_{16}$N-CO-($C_1$-$C_6$)alkyl, ($C_1$-$C_6$)alkyl-S(O)$_m$, $R_{15}R_{16}$NS(O)$_m$, $R_{15}R_{16}$NS(O)$_m$ ($C_1$-$C_6$)alkyl, $R_{15}$S(O)$_m$ $R_{16}$N, $R_{15}$S(O)$_m$$R_{16}$N($C_1$-$C_6$)alkyl or a group of the formula (VII)



(VII);

$R_2$ is hydrogen, ($C_1$-$C_6$)alkyl, ($C_1$-$C_6$)alkylsulfonyl, ($C_2$-$C_6$)alkenyl, or ($C_2$-$C_6$)alkynyl wherein the alkyl, alkenyl and alkynyl groups are optionally substituted by deuterium, hydroxy, trifluoromethyl, ($C_1$-$C_4$)alkoxy, ($C_1$-$C_6$)acyloxy, ($C_1$-$C_6$)alkylamino, (($C_1$-$C_6$)alkyl)$_2$amino, cyano, nitro, ($C_2$-$C_6$)alkenyl, ($C_2$-$C_6$)alkynyl or ($C_1$-$C_6$)acylamino; or $R_2$is ($C_3$-$C_{10}$)cycloalkyl wherein the cycloalkyl group is optionally substituted by deuterium, hydroxy, trifluoromethyl, ($C_1$-$C_6$)acyloxy, ($C_1$-$C_6$)acylamino, ($C_1$-$C_6$)alkylamino, (($C_1$-$C_6$)alkyl)$_2$amino, cyano, cyano($C_1$-$C_6$)alkyl, trifluoromethyl($C_1$-$C_6$)alkyl, nitro, nitro($C_1$-$C_6$)alkyl or ($C_1$-$C_6$)acylamino;

$R_3$ is hydrogen, ($C_1$-$C_6$)alkyl, ($C_3$-$C_{10}$)cycloalkyl, ($C_2$-$C_6$)alkenyl, or ($C_2$-$C_6$)alkynyl wherein the alkyl, alkenyl and alkynyl groups are optionally substituted by

deuterium, hydroxy, halogen, trifluoromethyl, ($C_1$-$C_4$)alkoxy, ($C_1$-$C_6$)acyloxy, ($C_1$-$C_6$)alkylamino, ($C_1$-$C_6$)acylamino, (($C_1$-$C_6$)alkyl)$_2$amino, ($C_2$-$C_6$)alkenyl, ($C_2$-$C_6$)alkynyl, cyano, cyano($C_1$-$C_6$)alkyl, trifluoromethyl($C_1$-$C_6$)alkyl, nitro, or nitro($C_1$-$C_6$)alkyl ;

$R_4$ is ($C_1$-$C_6$)alkyl, ($C_3$-$C_{10}$)cycloalkyl, ($C_2$-$C_6$)alkenyl, or ($C_2$-$C_6$)alkynyl wherein the alkyl, alkenyl and alkynyl groups are optionally substituted by deuterium, hydroxy, halogen, amino, trifluoromethyl, ($C_1$-$C_4$)alkoxy, ($C_1$-$C_6$)acyloxy, ($C_1$-$C_6$)alkylamino, ($C_1$-$C_6$)acylamino, (($C_1$-$C_6$)alkyl)$_2$amino, ($C_2$-$C_6$)alkenyl, ($C_2$-$C_6$)alkynyl, cyano, cyano($C_1$-$C_6$)alkyl, trifluoromethyl($C_1$-$C_6$)alkyl, nitro, or nitro($C_1$-$C_6$)alkyl;

$R_6$, $R_7$, $R_8$, $R_9$, $R_{10}$ and $R_{11}$ are each independently hydrogen or ($C_1$-$C_6$)alkyl optionally substituted by deuterium, hydroxy, trifluoromethyl, ($C_1$-$C_6$)acyloxy, ($C_1$-$C_6$)acylamino, ($C_1$-$C_6$)alkylamino, (($C_1$-$C_6$)alkyl)$_2$amino, cyano, cyano($C_1$-$C_6$)alkyl, trifluoromethyl($C_1$-$C_6$)alkyl, nitro, nitro($C_1$-$C_6$)alkyl or ($C_1$-$C_6$)acylamino; $R_{12}$ is carboxy, cyano, amino, oxo, deuterium, hydroxy, trifluoromethyl, ($C_1$-$C_6$)alkyl, trifluoromethyl($C_1$-$C_6$)alkyl, ($C_1$-$C_6$)alkoxy, ($C_1$-$C_6$)acyl, ($C_1$-$C_6$)alkylamino, (($C_1$-$C_6$)alkyl)$_2$ amino, amino($C_1$-$C_6$)alkyl, ($C_1$-$C_6$)alkoxy-CO-NH, ($C_1$-$C_6$)alkylamino-CO-, ($C_2$-$C_6$)alkenyl, ($C_2$-$C_6$) alkynyl, ($C_1$-$C_6$)alkylamino, hydroxy($C_1$-$C_6$)alkyl, ($C_1$-$C_6$)alkoxy($C_1$-$C_6$)alkyl, ($C_1$-$C_6$)acyloxy($C_1$-$C_6$)alkyl, nitro, cyano($C_1$-$C_6$)alkyl, nitro($C_1$-$C_6$)alkyl, trifluoromethyl, trifluoromethyl($C_1$-$C_6$)alkyl, ($C_1$-$C_6$)acylamino, ($C_1$-$C_6$)acylamino($C_1$-$C_6$)alkyl, ($C_1$-$C_6$)alkoxy($C_1$-$C_6$)acylamino, amino($C_1$-$C_6$)acyl, amino($C_1$-$C_6$)acyl($C_1$-$C_6$)alkyl, ($C_1$-$C_6$)alkylamino($C_1$-$C_6$)acyl, (($C_1$-$C_6$)alkyl)$_2$amino($C_1$-$C_6$)acyl, $R_{15}R_{16}$N-CO-O-, $R_{15}R_{16}$N-CO-($C_1$-$C_6$)alkyl, $R_{15}$C(O)NH, $R_{15}$OC(O)NH, $R_{15}$NHC(O)NH, ($C_1$-$C_6$)alkyl-S(O)$_m$, ($C_1$-$C_6$)alkyl-S(O)$_m$-($C_1$-$C_6$)alkyl, $R_{15}R_{16}$NS(O)$_m$, $R_{15}R_{16}$NS(O)$_m$ ($C_1$-$C_6$)alkyl, $R_{15}$S(O)$_m$ $R_{16}$N, or $R_{15}$S(O)$_m$$R_{16}$N($C_1$-$C_6$)alkyl;

$R_{15}$ and $R_{16}$ are each independently hydrogen or ($C_1$-$C_6$)alkyl;

X is S(O)$_p$, oxygen, carbonyl or –C(=N-cyano)-;

Y is S(O)$_p$ or carbonyl;

Z is S(O)$_p$, carbonyl, C(O)O-, or C(O)NR-;

a is 0, 1, 2, 3 or 4;

b, c, e, f and g are each independently 0 or 1;

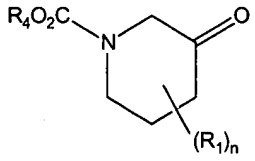
d is 0, 1, 2, or 3;

m is 0, 1 or 2;

n is 1, 2, 3, or 4;

p is 0, 1 or 2; and

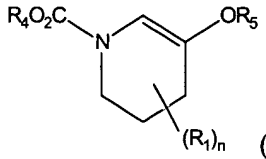
wherein the method comprises reacting $NHR_2R_3$, $N(CH_3)R_2H$, or $N(CH_2CH_3)R_2H$ with a compound of formula (IIa)



(IIa)

and reducing the compound so formed with a reducing agent.

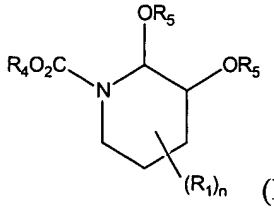
2. (ORIGINAL) The method of claim 1, wherein the method further comprises formation of the compound of the formula (IIa) by reacting a compound having the formula $R_4OH$, water, or $R_4NH_2$ and a compound of the formula (IIIa)



(IIIa)

wherein $R_5$ is $CO(C_1\text{-}C_6)$alkyl.

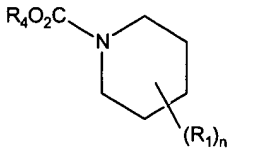
3. (ORIGINAL) The method of claim 2, wherein the method further comprises formation of the compound of the formula (IIIa) by heating a compound having the formula (IVa)



(IVa)

with a compound having the formula$(C_1\text{-}C_6)$alkyl-(C=O)-O-(C=O)-$(C_1\text{-}C_6)$alkyl.

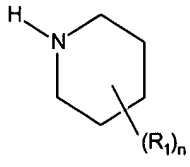
4. (ORIGINAL) The method of claim 3, wherein the method further comprises formation of the compound of the formula (IVa) by oxidizing a compound having the formula (Va)



(Va)

under oxidizing conditions.

5. (ORIGINAL) The method of claim 4, wherein the method further comprises formation of the compound of the formula (Va) by reacting a compound having the formula $WCO_2R_4$ and a compound having the formula (VIa)

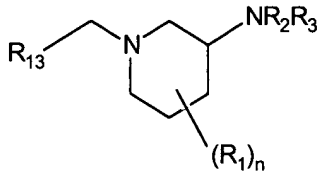


(VIa)

wherein W is halogen.

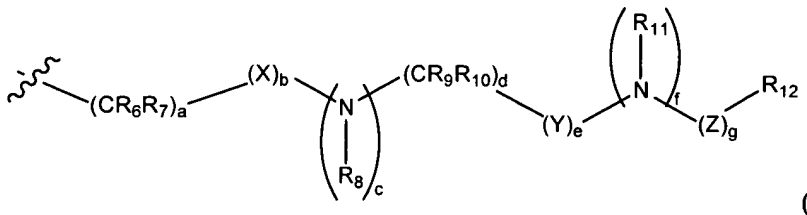
6. (ORIGINAL) The method of claim 4, wherein the oxidizing conditions are an electrochemical oxidation.

7. (ORIGINAL) A method of making a compound having the formula (Ib)



(Ib)

wherein $R_1$ is carboxy, amino, deuterium, hydroxy, $(C_1\text{-}C_6)$alkyl, $(C_1\text{-}C_6)$alkoxy, $(C_1\text{-}C_6)$alkylamino, amino$(C_1\text{-}C_6)$alkyl, $(C_2\text{-}C_6)$alkenyl, $(C_2\text{-}C_6)$ alkynyl, $(C_1\text{-}C_6)$alkylamino, amino$(C_1\text{-}C_6)$alkyl, hydroxy$(C_1\text{-}C_6)$alkyl, $(C_1\text{-}C_6)$alkoxy$(C_1\text{-}C_6)$alkyl, nitro, nitro$(C_1\text{-}C_6)$alkyl, trifluoromethyl, trifluoromethyl$(C_1\text{-}C_6)$alkyl, $(C_1\text{-}C_6)$alkyl-$S(O)_m$, $R_{15}R_{16}NS(O)_m$, $R_{15}R_{16}NS(O)_m$ $(C_1\text{-}C_6)$alkyl, $R_{15}S(O)_m$ $R_{16}N$, $R_{15}S(O)_mR_{16}N(C_1\text{-}C_6)$alkyl or a group of the formula (VII)



(VII);

$R_2$ is hydrogen, $(C_1\text{-}C_6)$alkyl, $(C_1\text{-}C_6)$alkylsulfonyl, $(C_2\text{-}C_6)$alkenyl, or $(C_2\text{-}C_6)$alkynyl wherein the alkyl, alkenyl and alkynyl groups are optionally substituted by deuterium, hydroxy, amino, trifluoromethyl, $(C_1\text{-}C_4)$alkoxy, $(C_1\text{-}C_6)$alkylamino, $((C_1\text{-}C_6)$alkyl$)_2$amino, nitro, $(C_2\text{-}C_6)$alkenyl, or $(C_2\text{-}C_6)$alkynyl; or $R_2$ is $(C_3\text{-}C_{10})$cycloalkyl wherein the cycloalkyl group is optionally substituted by deuterium, hydroxy, amino,

trifluoromethyl, $(C_1$-$C_6)$alkylamino, $((C_1$-$C_6)alkyl)_2$amino, trifluoromethyl$(C_1$-$C_6)$alkyl, nitro, or nitro$(C_1$-$C_6)$alkyl;

$R_3$ is hydrogen, $(C_1$-$C_6)$alkyl, $(C_3$-$C_{10})$cycloalkyl, $(C_2$-$C_6)$alkenyl, or $(C_2$-$C_6)$alkynyl wherein the alkyl, alkenyl and alkynyl groups are optionally substituted by deuterium, hydroxy, amino, trifluoromethyl, $(C_1$-$C_4)$alkoxy, $(C_1$-$C_6)$alkylamino, $((C_1$-$C_6)alkyl)_2$amino, $(C_2$-$C_6)$alkenyl, $(C_2$-$C_6)$alkynyl, trifluoromethyl$(C_1$-$C_6)$alkyl, nitro, or nitro$(C_1$-$C_6)$alkyl;

$R_6$, $R_7$, $R_8$, $R_9$, $R_{10}$ and $R_{11}$ are each independently hydrogen or $(C_1$-$C_6)$alkyl optionally substituted by deuterium, hydroxy, amino, trifluoromethyl, $(C_1$-$C_6)$alkylamino, $((C_1$-$C_6)alkyl)_2$amino, trifluoromethyl$(C_1$-$C_6)$alkyl, nitro, or nitro$(C_1$-$C_6)$alkyl; $R_{12}$ is carboxy, amino, deuterium, hydroxy, trifluoromethyl, $(C_1$-$C_6)$alkyl, trifluoromethyl$(C_1$-$C_6)$alkyl, $(C_1$-$C_6)$alkoxy, $(C_1$-$C_6)$alkylamino, $((C_1$-$C_6)alkyl)_2$ amino, amino$(C_1$-$C_6)$alkyl, $(C_2$-$C_6)$alkenyl, $(C_2$-$C_6)$ alkynyl, $(C_1$-$C_6)$alkylamino, hydroxy$(C_1$-$C_6)$alkyl, $(C_1$-$C_6)$alkoxy$(C_1$-$C_6)$alkyl, nitro, nitro$(C_1$-$C_6)$alkyl, trifluoromethyl, trifluoromethyl$(C_1$-$C_6)$alkyl, $(C_1$-$C_6)$alkyl-$S(O)_m$, $(C_1$-$C_6)$alkyl-$S(O)_m$-$(C_1$-$C_6)$alkyl, $R_{15}R_{16}NS(O)_m$, $R_{15}R_{16}NS(O)_m$ $(C_1$-$C_6)$alkyl, or $R_{15}S(O)_m R_{16}N$, or $R_{15}S(O)_m R_{16}N(C_1$-$C_6)$alkyl;

$R_{13}$ is $(C_2$-$C_6)$alkenyl, $(C_2$-$C_6)$alkynyl, $(C_6$-$C_{10})$aryl, $(C_1$-$C_6)$carboalkoxy, $(C_5$ - $C_9)$heteroaryl, $(C_6$-$C_{10})$aryl$(C_1$-$C_6)$alkyl, or $(C_5$-$C_9)$heteroaryl$(C_1$-$C_6)$alkyl wherein the $R_{13}$ group is optionally substituted by deuterium, hydroxy, amino, trifluoromethyl,, $(C_1$-$C_6)$alkyl, $(C_1$-$C_4)$alkoxy, $(C_1$-$C_6)$alkylamino, $((C_1$-$C_6)alkyl)_2$amino, $(C_2$-$C_6)$alkenyl, $(C_2$-$C_6)$alkynyl, trifluoromethyl$(C_1$-$C_6)$alkyl, nitro, or nitro$(C_1$-$C_6)$alkyl;

$R_{15}$ and $R_{16}$ are each independently hydrogen or $(C_1$-$C_6)$alkyl;

X is $S(O)_p$;

Y is $S(O)_p$;

Z is $S(O)_p$;

a is 0, 1, 2, 3 or 4;

b, c, e, f and g are each independently 0 or 1;

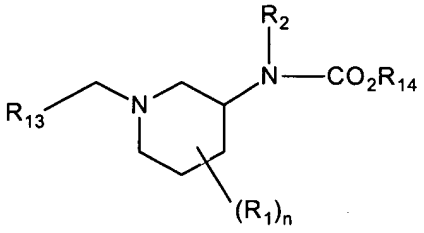
d is 0, 1, 2, or 3;

m is 0, 1 or 2;

n is 1, 2, 3, or 4;

p is 0, 1 or 2; and

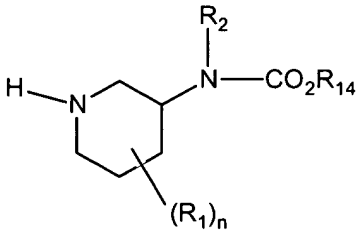
wherein the method comprises reducing a compound of formula (IIb)



(IIb)

with a reducing agent, wherein $R_{14}$ is $(C_1\text{-}C_6)$alkyl, $(C_3\text{-}C_{10})$cycloalkyl, $(C_2\text{-}C_6)$alkenyl, or $(C_2\text{-}C_6)$alkynyl wherein the alkyl, alkenyl and alkynyl groups are optionally substituted by deuterium, hydroxy, halogen, amino, trifluoromethyl, $(C_1\text{-}C_4)$alkoxy, $(C_1\text{-}C_6)$alkylamino, $((C_1\text{-}C_6)\text{alkyl})_2$amino, $(C_2\text{-}C_6)$alkenyl, $(C_2\text{-}C_6)$alkynyl, trifluoromethyl$(C_1\text{-}C_6)$alkyl, nitro, or nitro$(C_1\text{-}C_6)$alkyl.

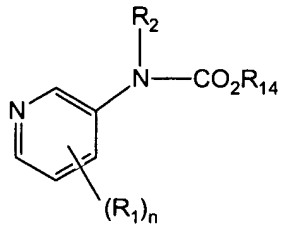
8. (ORIGINAL) The method of claim 7, wherein the method further comprises formation of the compound of the formula (IIb) by reacting a compound having the formula (IIIb)



(IIIb)

with an aldehyde of formula $R_{13}$-(C=O)-H and reducing the compound so formed with a reducing agent.

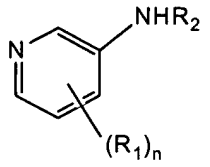
9. (ORIGINAL) The method of claim 8, wherein the method further comprises formation of the compound of the formula (IIIb) by hydrogenating a compound having the formula (IVb)



(IVb)

in the presence of a catalyst.

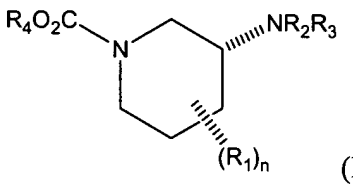
10. (ORIGINAL) The method of claim 9, wherein the method further comprises formation of the compound of the formula (IVb) by reacting a compound having the formula (Vb)



(Vb)

with ($R_{14}$-O-(C=O))2O or $R_{14}$-O-(C=O)-X wherein X is halo.

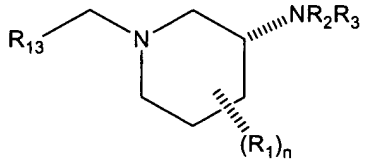
11. (CURRENTLY AMENDED) The method of claim 1, wherein the compound of formula (Ia) has the relative stereochemistry of formula (Ia-1)



(Ia-1);

$R_1$ is ($C_1$-$C_6$)alkyl; n is one; $R_2$ and $R_3$ are each hydrogen or ($C_1$-$C_6$)alkyl; and $R_4$ is ($C_1$-$C_6$)alkyl.

12. (CURRENTLY AMENDED) The method of claim 7, wherein the compound of formula (Ib) has the relative stereochemistry of formula (Ib-1)



(Ib-1);

$R_1$ is ($C_1$-$C_6$)alkyl; n is one; $R_2$ and $R_3$ are each hydrogen or ($C_1$-$C_6$)alkyl; and $R_{13}$ is ($C_6$-$C_{10}$)aryl.

13. (ORIGINAL) The method of claim 1, wherein the reducing agent is a borohydride.

14. (ORIGINAL) The method of claim 7, wherein the reducing agent is lithium aluminum hydride.

15. (ORIGINAL) The method of claim 9, wherein the catalyst is Rh/alumina or Rh/C.